

Shills, Graves & Associates, Inc.

P. O. Box 521

Notre Dame, Ind. 46556

June 5, 1970

Soil and Foundation Consultants
Materials Testing Services

COPY

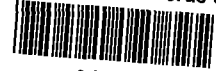
Schulman
S. R. L. Murphy

Laboratory located at
1119 South Bend Ave.
Phone 233-6820

Engineering Planning Services
1520 North Main Street
Mishawaka, Indiana 46544

DEC 1 1970

EPA Region 5 Records Ctr.



316237

Gentlemen:

As requested by Mr. Richardson, we have investigated the soil conditions at a site on the west side of Gertrude Street and on the north side of Chippewa Street (extended) in South Bend, Indiana. The site extends approximately 1650 feet along Gertrude and 1340 feet along the extension of Chippewa. Our investigation has consisted of studying the geology of the area, reading the soil map of the area and making 10 power auger soil borings from 10 to 38 feet deep.

Geology tells us that the site is in the Maxinkuckee glacial moraine area near the Kankakee glacial outwash area, so the soils are likely to be unsorted silts, clays and sands and gravels with a tendency for the layers of sand and gravel to be interspersed with layers of silt or clay. Shale bedrock is some 200 feet below the surface. Wells in the immediate vicinity are about 100 feet deep and draw their water from about elevation 700 which is 80 to 100 feet below the surface of the site.

The soil map shows that the surface soils on the southeast and northwest corners of the site are sands and gravels and the central portion is imperfectly drained silts and clays. At the north central portion the natural surface soil was muck, but this has been covered with fill for many years.

The soil borings were made to determine the character of the soil below the immediate surface. The logs of the 10 soil borings are attached hereto. The soil borings show that the soil in Area 1 and 2 are sands and gravel to depths of about 25 feet where a layer of clay occurs and then more sand and gravel. The water table in these areas is at about elevation 784, because a clay layer keeps the water from percolating downward and Gertrude Street keeps it from flowing easterly to its natural surface outlet. The soil in Area 3 is all silt and clay to depths of 25 and more feet. The water table is about 25 feet below the surface. The soil in Area 4 is 6 to 8 feet of silty sand underlaid by 7 or more feet of clay and then more sand. The water is pocketed in the silty sand above the clay. Area 5 is the fill area where a thick clay layer underlies the fill and the water is at the natural ground surface.

Cont'd

Shilts, Graves & Associates, Inc.

P. O. Box 521

Notre Dame, Ind. 46556

June 5, 1970

- 2 -

*and Foundation Consultants
Materials Testing Services*

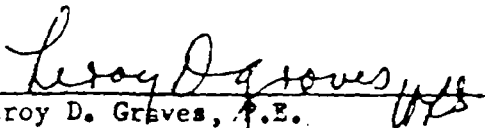
*Laboratory located at
1119 South Bend Ave.
Phone 233-6820*

Engineering Planning Services

This site is excellent for a properly operated sanitary landfill. Areas 1 and 2 have excellent soil for covering soil. Areas 3 and 4 have deep clays where trenches can be excavated to receive the solid waste. Wells in the vicinity are so deep and protected by clay layers that they cannot be polluted by the landfill.

Sincerely,

SHILTS, GRAVES & ASSOCIATES, INC.


Leroy D. Graves, P.E.
Secretary & Treasurer

LDG:gem

June 5, 1970

Laboratory located at
1119 South Bend Ave.
Phone 233-6820

SOIL BORING

Gertrude Street Site

South Bend, Indiana

Boring 1

Depth Feet	EL = 785.5'	Soil Description
0 - 1.0		Dark brown sandy topsoil
1.0 - 8.5		Brown silt and sand
8.5 - 10.0		Gray brown mottled silty clay
		Water table at 1.3'

Boring 2

EL = 806.5'

0 - 13.0	Brown sand
----------	------------

Boring 3

EL = 803.0'

0 - 13.0	Brown sand and fine gravel
----------	----------------------------

Boring 4

EL = 7 . '

0 - 14	Brown silty clay
14 - 19	Gray silty clay
19 - 23	Brown sand trace clay

Boring 5

EL = 800.5'

0 - 1.0	Brown clayey topsoil
1.0 - 15.0	Brown silty clay
15.0 - 25.0	Gray silty clay or clayey silt
Water at 26'	

Cont'd

791

June 5, 1970

Laboratory
1119 South Bend Ave.
Phone 233-6820

- 2 -

SOIL BORING

Gertrude Street Site
South Bend, Indiana

Boring 6

EL = 78.5'

Depth Feet	Soil Description
0 - 1.0	Brown clayey topsoil
1.0 - 14.0	Brown silty clay
14.0 - 18.0	Gray silty clay
18.0 - 25.0	Brown silty clay
25.0 - 28.0	Brown silty sand

Boring 7

EL = 795.0'

0 - 1.0	Brown sandy topsoil
1.0 - 6.0	Brown silt and sand
6.0 - 13.0	Gray silty clay
13.0 - 15.0	Brown medium sand

Boring 9

EL = 791.0'

0 - 10'	Miscellaneous fill	XXX
---------	--------------------	-----

Boring 10

EL = 791.5'

0 - 1.0	Dark brown sandy topsoil
1.0 - 7.0	Brown silty sand
7.0 - 10.0	Gray brown mottled silty clay

Water at 4'

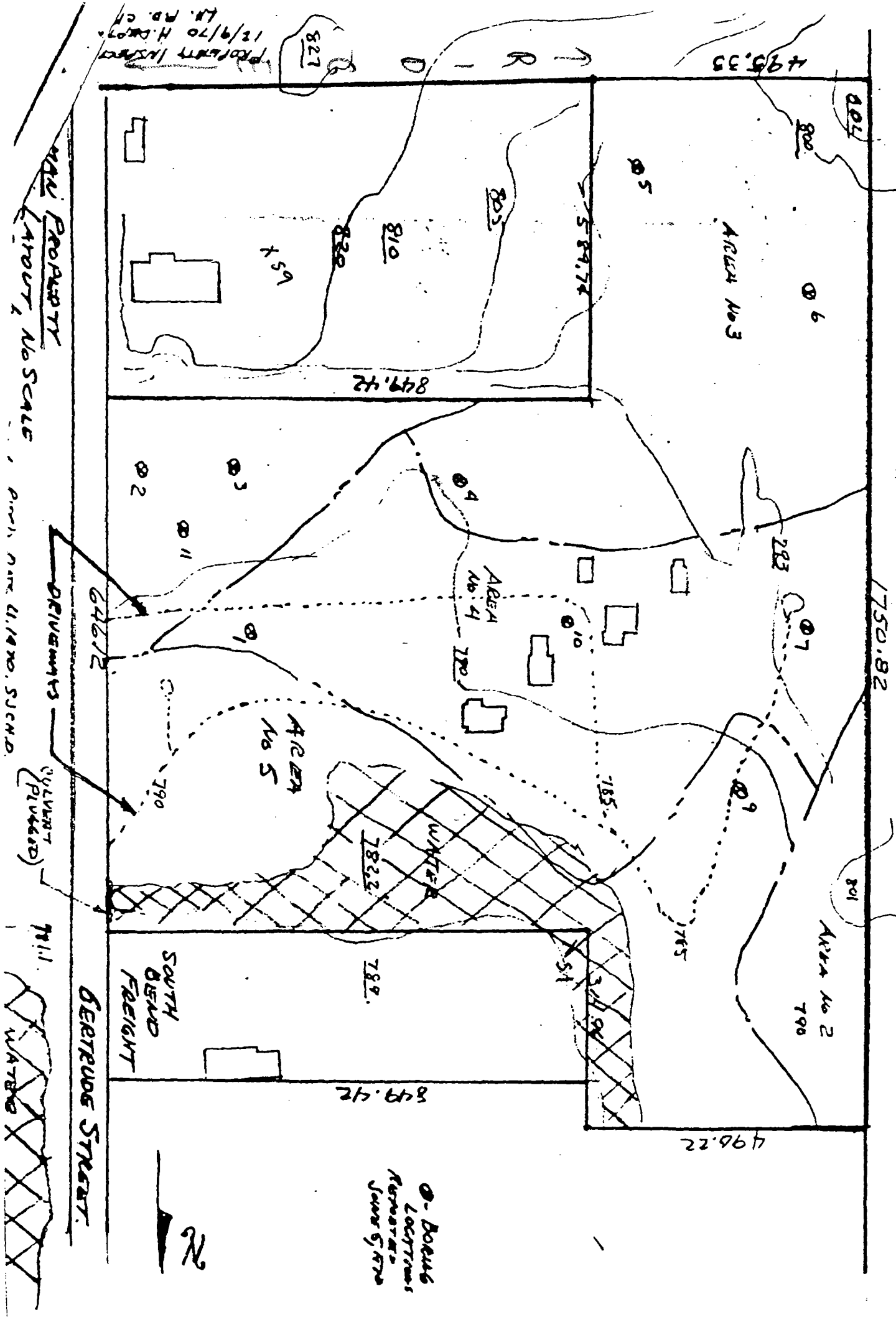
Boring 11

EL = 801.5'

0 - 26	Brown silty sand and gravel
26 - 30	Brown silty clay
30 - 38	Brown silty sand and gravel

Water at 16'

PROPERTY LAYOUT
12/9/70 H. L. 03
L. R. 03



● - Boats
Locations
Remnants
from 5/70

